HEXAWARE

ASSIGNMENT 4

Task1

Database Design Design a SQL schema for a Courier Management System with tables for Customers, Couriers, Orders, and Parcels. Define the relationships between these tables using appropriate foreign keys. Requirements: • Define the Database Schema • Create SQL tables for entities such as User, Courier, Employee, Location,Payment • Define relationships between these tables (one-to-many, many-to-many, etc.). • Populate Sample Data • Insert sample data into the tables to simulate real-world scenarios.

```
mysql> create database CourierMS;
Query OK, 1 row affected (0.03 sec)

mysql> use CourierMS;
Database changed
mysql> CREATE TABLE Users (
    ->     UserID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Email VARCHAR(255) UNIQUE,
    ->     Password VARCHAR(255),
    ->     ContactNumber VARCHAR(20),
    ->     Address TEXT
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql> CREATE TABLE Couriers (
    ->     CourierID INT PRIMARY KEY,
    ->     SenderName VARCHAR(255),
    ->     SenderAddress TEXT,
    ->     ReceiverName VARCHAR(255),
    ->     ReceiverAddress TEXT,
    ->     Weight DECIMAL(5, 2),
    ->     Status VARCHAR(50),
    ->     TrackingNumber VARCHAR(20) UNIQUE,
    ->     DeliveryDate DATE
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE CourierServices (
    ->     ServiceID INT PRIMARY KEY,
    ->     ServiceName VARCHAR(100),
    ->     Cost DECIMAL(8, 2)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql> CREATE TABLE Employees (
    ->     EmployeeID INT PRIMARY KEY,
    ->     Name VARCHAR(255),
    ->     Email VARCHAR(255) UNIQUE,
    ->     ContactNumber VARCHAR(20),
    ->     Role VARCHAR(50),
    ->     Salary DECIMAL(10, 2)
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE Locations (
    ->     LocationID INT PRIMARY KEY,
    ->     LocationName VARCHAR(100),
    ->     Address TEXT
    -> );
Query OK, 0 rows affected (0.03 sec)

mysql> CREATE TABLE Payments (
    ->     PaymentID INT PRIMARY KEY,
    ->     CourierID INT,
    ->     LocationID INT,
    ->     Amount DECIMAL(10, 2),
    ->     PaymentDate DATE,
    ->     FOREIGN KEY (CourierID) REFERENCES Couriers(CourierID),
    ->     FOREIGN KEY (LocationID) REFERENCES Locations(LocationID)
    -> );
Query OK, 0 rows affected (0.04 sec)

mysql>
```

Task 2: Select,Where Solve the following queries in the Schema that you have created above

1. List all customers:

```
mysql> select * from Users;
+--------+----------------+-----------------------------+-------------+---------------+--------------+
| UserID | Name           | Email                       | Password    | ContactNumber | Address      |
+--------+----------------+-----------------------------+-------------+---------------+--------------+
|      1 | John Doe       | john.doe@example.com        | password123 | 123-456-7890  | 123 Main St  |
|      2 | Jane Smith     | jane.smith@example.com      | password456 | 987-654-3210  | 456 Oak St   |
|      3 | Alice Johnson  | alice.johnson@example.com   | pass123     | 111-222-3333  | 789 Pine St  |
|      4 | Bob Williams   | bob.williams@example.com    | pass456     | 555-444-3333  | 101 Elm St   |
|      5 | Eva Davis      | eva.davis@example.com       | pass789     | 333-777-9999  | 456 Birch St |
|      6 | Michael Brown  | michael.brown@example.com   | abc123      | 777-888-5555  | 789 Cedar St |
|      7 | Olivia Jones   | olivia.jones@example.com    | abc456      | 999-888-7777  | 102 Maple St |
|      8 | David Miller   | david.miller@example.com    | abc789      | 777-666-5555  | 234 Oak St   |
|      9 | Sophia Wilson  | sophia.wilson@example.com   | xyz123      | 111-333-5555  | 567 Pine St  |
|     10 | William Taylor | william.taylor@example.com  | xyz456      | 222-333-4444  | 890 Birch St |
+--------+----------------+-----------------------------+-------------+---------------+--------------+
10 rows in set (0.00 sec)
```

2. List all orders for a specific customer:

```
mysql> SELECT UserID
    -> FROM Users
    -> WHERE Name = 'Jane Smith' AND Email = 'jane.smith@example.com';
+--------+
| UserID |
+--------+
|      2 |
+--------+
1 row in set (0.00 sec)
```

3. List all couriers:

```
mysql> SELECT * FROM Couriers;
+-----------+------------+-----------------+-------------+-----------------+--------+------------+----------------+--------------+
| CourierID | SenderName | SenderAddress   | ReceiverName | ReceiverAddress | Weight | Status     | TrackingNumber | DeliveryDate |
+-----------+------------+-----------------+-------------+-----------------+--------+------------+----------------+--------------+
|         1 | Sender 1   | Sender Address 1 | Receiver 1  | Receiver Address 1 |   2.50 | In Transit | TN123456       | 2023-01-15   |
|         2 | Sender 2   | Sender Address 2 | Receiver 2  | Receiver Address 2 |   1.80 | Delivered  | TN789012       | 2023-01-20   |
|         3 | Sender 3   | Sender Address 3 | Receiver 3  | Receiver Address 3 |   3.20 | In Transit | TN345678       | 2023-01-25   |
|         4 | Sender 4   | Sender Address 4 | Receiver 4  | Receiver Address 4 |   1.00 | Pending    | TN901234       | 2023-02-01   |
|         5 | Sender 5   | Sender Address 5 | Receiver 5  | Receiver Address 5 |   2.80 | Delivered  | TN567890       | 2023-02-05   |
|         6 | Sender 6   | Sender Address 6 | Receiver 6  | Receiver Address 6 |   4.00 | In Transit | TN234567       | 2023-02-10   |
|         7 | Sender 7   | Sender Address 7 | Receiver 7  | Receiver Address 7 |   1.50 | Delivered  | TN890123       | 2023-02-15   |
|         8 | Sender 8   | Sender Address 8 | Receiver 8  | Receiver Address 8 |   2.00 | Pending    | TN456789       | 2023-02-20   |
|         9 | Sender 9   | Sender Address 9 | Receiver 9  | Receiver Address 9 |   2.20 | Delivered  | TN012345       | 2023-02-25   |
|        10 | Sender 10  | Sender Address 10 | Receiver 10 | Receiver Address 10 |   3.50 | In Transit | TN678901       | 2023-03-01   |
+-----------+------------+-----------------+-------------+-----------------+--------+------------+----------------+--------------+
10 rows in set (0.00 sec)

mysql>
```

4. List all packages for a specific order:

```
mysql> SELECT *
    -> FROM Couriers
    -> WHERE CourierID = 4;
+-----------+------------+-----------------+--------------+-------------------+--------+---------+----------------+--------------+
| CourierID | SenderName | SenderAddress   | ReceiverName | ReceiverAddress   | Weight | Status  | TrackingNumber | DeliveryDate |
+-----------+------------+-----------------+--------------+-------------------+--------+---------+----------------+--------------+
|         4 | Sender 4   | Sender Address 4 | Receiver 4   | Receiver Address 4 |   1.00 | Pending | TN901234       | 2023-02-01   |
+-----------+------------+-----------------+--------------+-------------------+--------+---------+----------------+--------------+
1 row in set (0.00 sec)
```

5. List all deliveries for a specific courier:

```
mysql> SELECT *
    -> FROM Courier
    -> WHERE CourierID = 6;
+-----------+------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status  | TrackingNumber | DeliveryDate |
+-----------+------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
|         6 | Sender6    | SenderAddr6   | Receiver6    | ReceiverAddr6   |   3.70 | Pending | TN123789       | 2023-06-20   |
+-----------+------------+---------------+--------------+-----------------+--------+---------+----------------+--------------+
1 row in set (0.00 sec)
```

6. List all undelivered packages:

```
mysql> SELECT *
    -> FROM Courier
    -> WHERE Status <> 'Delivered';
+-----------+------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status     | TrackingNumber | DeliveryDate |
+-----------+------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
|         1 | Sender1    | SenderAddr1   | Receiver1    | ReceiverAddr1   |   2.50 | In Transit | TN123456       | 2023-01-15   |
|         3 | Sender3    | SenderAddr3   | Receiver3    | ReceiverAddr3   |   1.80 | Pending    | TN345678       | 2023-03-25   |
|         5 | Sender5    | SenderAddr5   | Receiver5    | ReceiverAddr5   |   2.00 | In Transit | TN567890       | 2023-05-15   |
|         6 | Sender6    | SenderAddr6   | Receiver6    | ReceiverAddr6   |   3.70 | Pending    | TN123789       | 2023-06-20   |
|         8 | Sender8    | SenderAddr8   | Receiver8    | ReceiverAddr8   |   1.50 | In Transit | TN890123       | 2023-08-10   |
|         9 | Sender9    | SenderAddr9   | Receiver9    | ReceiverAddr9   |   3.00 | Pending    | TN345679       | 2023-09-15   |
+-----------+------------+---------------+--------------+-----------------+--------+------------+----------------+--------------+
6 rows in set (0.00 sec)
```

7. List all packages that are scheduled for delivery today:

```
mysql> SELECT *
    -> FROM Courier
    -> WHERE DATE(2023-01-15) = CURDATE();
Empty set, 1 warning (0.00 sec)
```

8. List all packages with a specific status:

```
mysql> SELECT *
    -> FROM Courier
    -> WHERE Status = 'delivered';
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
|         2 | Sender2    | SenderAddr2   | Receiver2    | ReceiverAddr2   |   3.20 | Delivered | TN789012       | 2023-02-20   |
|         4 | Sender4    | SenderAddr4   | Receiver4    | ReceiverAddr4   |   4.50 | Delivered | TN901234       | 2023-04-10   |
|         7 | Sender7    | SenderAddr7   | Receiver7    | ReceiverAddr7   |   2.30 | Delivered | TN234567       | 2023-07-25   |
|        10 | Sender10   | SenderAddr10  | Receiver10   | ReceiverAddr10  |   2.80 | Delivered | TN456789       | 2023-10-20   |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
4 rows in set (0.00 sec)
```

9. Calculate the total number of packages for each courier.

```
mysql> SELECT CourierID, COUNT(*) AS TotalPackages
    -> FROM Courier
    -> GROUP BY CourierID;
+-----------+---------------+
| CourierID | TotalPackages |
+-----------+---------------+
|         1 |             1 |
|         2 |             1 |
|         3 |             1 |
|         4 |             1 |
|         5 |             1 |
|         6 |             1 |
|         7 |             1 |
|         8 |             1 |
|         9 |             1 |
|        10 |             1 |
+-----------+---------------+
10 rows in set (0.00 sec)
```

10. List all packages with a specific weight range:

```
mysql> SELECT *
    -> FROM Courier
    -> WHERE Weight BETWEEN 2.3 AND 4.5;
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
| CourierID | SenderName | SenderAddress | ReceiverName | ReceiverAddress | Weight | Status    | TrackingNumber | DeliveryDate |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
|         1 | Sender1    | SenderAddr1   | Receiver1    | ReceiverAddr1   |   2.50 | In Transit | TN123456       | 2023-01-15   |
|         2 | Sender2    | SenderAddr2   | Receiver2    | ReceiverAddr2   |   3.20 | Delivered  | TN789012       | 2023-02-20   |
|         4 | Sender4    | SenderAddr4   | Receiver4    | ReceiverAddr4   |   4.50 | Delivered  | TN901234       | 2023-04-10   |
|         6 | Sender6    | SenderAddr6   | Receiver6    | ReceiverAddr6   |   3.70 | Pending    | TN123789       | 2023-06-20   |
|         7 | Sender7    | SenderAddr7   | Receiver7    | ReceiverAddr7   |   2.30 | Delivered  | TN234567       | 2023-07-25   |
|         9 | Sender9    | SenderAddr9   | Receiver9    | ReceiverAddr9   |   3.00 | Pending    | TN345679       | 2023-09-15   |
|        10 | Sender10   | SenderAddr10  | Receiver10   | ReceiverAddr10  |   2.80 | Delivered  | TN456789       | 2023-10-20   |
+-----------+------------+---------------+--------------+-----------------+--------+-----------+----------------+--------------+
7 rows in set (0.00 sec)
```

11. Retrieve employees whose names contain 'John'

```
mysql> SELECT *
    -> FROM Employee
    -> WHERE Name LIKE '%John%';
+------------+-------------+-------------------------+---------------+----------+----------+
| EmployeeID | Name        | Email                   | ContactNumber | Role     | Salary   |
+------------+-------------+-------------------------+---------------+----------+----------+
|          1 | John Doe    | john.doe@example.com    | 123-456-7890  | Manager  | 60000.00 |
|          3 | Bob Johnson | bob.johnson@example.com | 555-123-4567  | Designer | 45000.00 |
+------------+-------------+-------------------------+---------------+----------+----------+
2 rows in set (0.01 sec)
```

12. Retrieve all courier records with payments greater than $50.

```
mysql> SELECT c.*
    -> FROM Courier c
    -> JOIN Payment p ON c.CourierID = p.CourierID
    -> WHERE p.Amount > 50;
Empty set (0.00 sec)
```

Task 3: GroupBy, Aggregate Functions, Having, Order By, where

14. Find the total number of couriers handled by each employee.

```
mysql> SELECT e.EmployeeID, e.Name AS EmployeeName, COUNT(c.CourierID) AS TotalCouriersHandled
    -> FROM Employee e
    -> LEFT JOIN Courier c ON e.EmployeeID = 5
    -> GROUP BY e.EmployeeID, e.Name;
+------------+--------------+----------------------+
| EmployeeID | EmployeeName | TotalCouriersHandled |
+------------+--------------+----------------------+
|          1 | John Doe     |                    0 |
|          2 | Jane Smith   |                    0 |
|          3 | Bob Johnson  |                    0 |
|          4 | Alice Brown  |                    0 |
|          5 | Charlie Davis |                   10 |
|          6 | Eva White    |                    0 |
|          7 | David Miller |                    0 |
|          8 | Sophia Wilson |                   0 |
|          9 | James Lee    |                    0 |
|         10 | Olivia Adams |                    0 |
+------------+--------------+----------------------+
10 rows in set (0.00 sec)
```

15. Calculate the total revenue generated by each location

```
mysql> SELECT l.LocationID, l.LocationName, SUM(p.Amount) AS TotalRevenue
    -> FROM Location l
    -> LEFT JOIN Payment p ON l.LocationID = p.LocationID
    -> GROUP BY l.LocationID, l.LocationName;
+------------+--------------+--------------+
| LocationID | LocationName | TotalRevenue |
+------------+--------------+--------------+
|          1 | Office A     |        25.50 |
|          2 | Warehouse 1  |        18.90 |
|          3 | Branch X     |        35.75 |
|          4 | Factory 5    |        30.60 |
|          5 | Storefront Z |        42.25 |
|          6 | Facility Q   |        22.75 |
|          7 | Hub 7        |        15.30 |
|          8 | Center B     |        48.90 |
|          9 | Depot Y      |        37.45 |
|         10 | Station C    |        29.80 |
+------------+--------------+--------------+
10 rows in set (0.01 sec)
```

16. Find the total number of couriers delivered to each location.

```
mysql> SELECT l.LocationID, l.LocationName, COUNT(c.CourierID) AS TotalCouriersDelivered
    -> FROM Location l
    -> LEFT JOIN Courier c ON l.LocationID = 5
    -> WHERE c.Status = 'Delivered'
    -> GROUP BY l.LocationID, l.LocationName;
+------------+--------------+-----------------------+
| LocationID | LocationName | TotalCouriersDelivered |
+------------+--------------+-----------------------+
|          5 | Storefront Z |                     4 |
+------------+--------------+-----------------------+
1 row in set (0.00 sec)
```

18. Find Locations with Total Payments Less Than a Certain Amount

```
mysql> SELECT
    ->     l.LocationID,
    ->     l.LocationName,
    ->     SUM(p.Amount) AS TotalPayments
    -> FROM
    ->     Location l
    -> LEFT JOIN
    ->     Payment p ON l.LocationID = p.LocationID
    -> GROUP BY
    ->     l.LocationID, l.LocationName
    -> HAVING
    ->     TotalPayments < 125000;
+------------+--------------+---------------+
| LocationID | LocationName | TotalPayments |
+------------+--------------+---------------+
|          1 | Office A     |         25.50 |
|          2 | Warehouse 1  |         18.90 |
|          3 | Branch X     |         35.75 |
|          4 | Factory 5    |         30.60 |
|          5 | Storefront Z |         42.25 |
|          6 | Facility Q   |         22.75 |
|          7 | Hub 7        |         15.30 |
|          8 | Center B     |         48.90 |
|          9 | Depot Y      |         37.45 |
|         10 | Station C    |         29.80 |
+------------+--------------+---------------+
10 rows in set (0.00 sec)
```

19. Calculate Total Payments per Location

```
mysql> SELECT
    ->     l.LocationID,
    ->     l.LocationName,
    ->     SUM(p.Amount) AS TotalPayments
    -> FROM
    ->     Location l
    -> LEFT JOIN
    ->     Payment p ON l.LocationID = p.LocationID
    -> GROUP BY
    ->     l.LocationID, l.LocationName;
+------------+--------------+---------------+
| LocationID | LocationName | TotalPayments |
+------------+--------------+---------------+
|          1 | Office A     |         25.50 |
|          2 | Warehouse 1  |         18.90 |
|          3 | Branch X     |         35.75 |
|          4 | Factory 5    |         30.60 |
|          5 | Storefront Z |         42.25 |
|          6 | Facility Q   |         22.75 |
|          7 | Hub 7        |         15.30 |
|          8 | Center B     |         48.90 |
|          9 | Depot Y      |         37.45 |
|         10 | Station C    |         29.80 |
+------------+--------------+---------------+
10 rows in set (0.00 sec)
```

21. Retrieve couriers who have received payments totaling more than $1000 after a certain date (PaymentDate > 'YYYY-MM-DD'):

```
mysql> SELECT
    ->     c.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     l.LocationID,
    ->     l.LocationName,
    ->     SUM(p.Amount) AS TotalPayments
    -> FROM
    ->     Courier c
    -> JOIN
    ->     Payment p ON c.CourierID = p.CourierID
    -> JOIN
    ->     Location l ON p.LocationID = l.LocationID
    -> WHERE
    ->     p.PaymentDate > '2023-05-25'
    -> GROUP BY
    ->     c.CourierID, c.SenderName, c.ReceiverName, l.LocationID, l.LocationName
    -> HAVING
    ->     TotalPayments > 1000;
Empty set (0.01 sec)
```

22. Retrieve locations where the total amount received is more than $5000 before a certain date (PaymentDate > 'YYYY-MM-DD')

```
mysql> SELECT
    ->     l.LocationID,
    ->     l.LocationName,
    ->     SUM(p.Amount) AS TotalPayments
    -> FROM
    ->     Location l
    -> JOIN
    ->     Payment p ON l.LocationID = p.LocationID
    -> JOIN
    ->     Courier c ON p.CourierID = c.CourierID
    -> WHERE
    ->     p.PaymentDate < '2023-03-15'
    -> GROUP BY
    ->     l.LocationID, l.LocationName
    -> HAVING
    ->     TotalPayments > 5000;
Empty set (0.01 sec)
```

Task 4: Inner Join,Full Outer Join, Cross Join, Left Outer Join,Right Outer Join

23. Retrieve Payments with Courier Information

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     p.LocationID,
    ->     l.LocationName,
    ->     p.Amount,
    ->     p.PaymentDate
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Courier c ON p.CourierID = c.CourierID
    -> JOIN
    ->     Location l ON p.LocationID = l.LocationID;
+-----------+-----------+------------+--------------+------------+--------------+--------+-------------+
| PaymentID | CourierID | SenderName | ReceiverName | LocationID | LocationName | Amount | PaymentDate |
+-----------+-----------+------------+--------------+------------+--------------+--------+-------------+
|         1 |         1 | Sender1    | Receiver1    |          1 | Office A     |  25.50 | 2023-01-05  |
|         2 |         2 | Sender2    | Receiver2    |          3 | Branch X     |  35.75 | 2023-02-10  |
|         3 |         3 | Sender3    | Receiver3    |          2 | Warehouse 1  |  18.90 | 2023-03-15  |
|         4 |         4 | Sender4    | Receiver4    |          5 | Storefront Z |  42.25 | 2023-04-20  |
|         5 |         5 | Sender5    | Receiver5    |          4 | Factory 5    |  30.60 | 2023-05-25  |
|         6 |         6 | Sender6    | Receiver6    |          6 | Facility Q   |  22.75 | 2023-06-30  |
|         7 |         7 | Sender7    | Receiver7    |          8 | Center B     |  48.90 | 2023-07-05  |
|         8 |         8 | Sender8    | Receiver8    |          7 | Hub 7        |  15.30 | 2023-08-10  |
|         9 |         9 | Sender9    | Receiver9    |          9 | Depot Y      |  37.45 | 2023-09-15  |
|        10 |        10 | Sender10   | Receiver10   |         10 | Station C    |  29.80 | 2023-10-20  |
+-----------+-----------+------------+--------------+------------+--------------+--------+-------------+
10 rows in set (0.01 sec)
```

24. Retrieve Payments with Location Information.

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     p.Amount,
    ->     p.PaymentDate,
    ->     l.LocationID,
    ->     l.LocationName,
    ->     l.Address
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Location l ON p.LocationID = l.LocationID;
+-----------+-----------+--------+-------------+------------+--------------+-----------------------------------------+
| PaymentID | CourierID | Amount | PaymentDate | LocationID | LocationName | Address                                 |
+-----------+-----------+--------+-------------+------------+--------------+-----------------------------------------+
|         1 |         1 |  25.50 | 2023-01-05  |          1 | Office A     | 123 Main St, Cityville, State, Zipcode      |
|         2 |         2 |  35.75 | 2023-02-10  |          3 | Branch X     | 789 Maple St, Villagetown, State, Zipcode   |
|         3 |         3 |  18.90 | 2023-03-15  |          2 | Warehouse 1  | 456 Oak St, Townsville, State, Zipcode      |
|         4 |         4 |  42.25 | 2023-04-20  |          5 | Storefront Z | 202 Elm St, Riverside, State, Zipcode       |
|         5 |         5 |  30.60 | 2023-05-25  |          4 | Factory 5    | 101 Pine St, Hamletville, State, Zipcode    |
|         6 |         6 |  22.75 | 2023-06-30  |          6 | Facility Q   | 303 Cedar St, Mountainville, State, Zipcode |
|         7 |         7 |  48.90 | 2023-07-05  |          8 | Center B     | 505 Redwood St, Valleytown, State, Zipcode  |
|         8 |         8 |  15.30 | 2023-08-10  |          7 | Hub 7        | 404 Birch St, Lakeside, State, Zipcode      |
|         9 |         9 |  37.45 | 2023-09-15  |          9 | Depot Y      | 606 Walnut St, Beachville, State, Zipcode   |
|        10 |        10 |  29.80 | 2023-10-20  |         10 | Station C    | 707 Spruce St, Hillside, State, Zipcode     |
+-----------+-----------+--------+-------------+------------+--------------+-----------------------------------------+
10 rows in set (0.00 sec)
```

25. Retrieve Payments with Courier and Location Information

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     p.Amount,
    ->     p.PaymentDate,
    ->     l.LocationID,
    ->     l.LocationName,
    ->     l.Address
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Courier c ON p.CourierID = c.CourierID
    -> JOIN
    ->     Location l ON p.LocationID = l.LocationID;
+-----------+-----------+------------+--------------+--------+-------------+------------+--------------+-----------------------------------------+
| PaymentID | CourierID | SenderName | ReceiverName | Amount | PaymentDate | LocationID | LocationName | Address
   |
+-----------+-----------+------------+--------------+--------+-------------+------------+--------------+-----------------------------------------+
|         1 |         1 | Sender1    | Receiver1    |  25.50 | 2023-01-05  |          1 | Office A     | 123 Main St, Cityville, State, Zipcode      |
|         2 |         2 | Sender2    | Receiver2    |  35.75 | 2023-02-10  |          3 | Branch X     | 789 Maple St, Villagetown, State, Zipcode   |
|         3 |         3 | Sender3    | Receiver3    |  18.90 | 2023-03-15  |          2 | Warehouse 1  | 456 Oak St, Townsville, State, Zipcode      |
|         4 |         4 | Sender4    | Receiver4    |  42.25 | 2023-04-20  |          5 | Storefront Z | 202 Elm St, Riverside, State, Zipcode       |
|         5 |         5 | Sender5    | Receiver5    |  30.60 | 2023-05-25  |          4 | Factory 5    | 101 Pine St, Hamletville, State, Zipcode    |
|         6 |         6 | Sender6    | Receiver6    |  22.75 | 2023-06-30  |          6 | Facility Q   | 303 Cedar St, Mountainville, State, Zipcode |
|         7 |         7 | Sender7    | Receiver7    |  48.90 | 2023-07-05  |          8 | Center B     | 505 Redwood St, Valleytown, State, Zipcode  |
|         8 |         8 | Sender8    | Receiver8    |  15.30 | 2023-08-10  |          7 | Hub 7        | 404 Birch St, Lakeside, State, Zipcode      |
|         9 |         9 | Sender9    | Receiver9    |  37.45 | 2023-09-15  |          9 | Depot Y      | 606 Walnut St, Beachville, State, Zipcode   |
|        10 |        10 | Sender10   | Receiver10   |  29.80 | 2023-10-20  |         10 | Station C    | 707 Spruce St, Hillside, State, Zipcode     |
+-----------+-----------+------------+--------------+--------+-------------+------------+--------------+-----------------------------------------+
10 rows in set (0.00 sec)
```

26. . List all payments with courier details

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     p.Amount,
    ->     p.PaymentDate
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Courier c ON p.CourierID = c.CourierID;
+-----------+-----------+------------+--------------+--------+-------------+
| PaymentID | CourierID | SenderName | ReceiverName | Amount | PaymentDate |
+-----------+-----------+------------+--------------+--------+-------------+
|         1 |         1 | Sender1    | Receiver1    |  25.50 | 2023-01-05  |
|         2 |         2 | Sender2    | Receiver2    |  35.75 | 2023-02-10  |
|         3 |         3 | Sender3    | Receiver3    |  18.90 | 2023-03-15  |
|         4 |         4 | Sender4    | Receiver4    |  42.25 | 2023-04-20  |
|         5 |         5 | Sender5    | Receiver5    |  30.60 | 2023-05-25  |
|         6 |         6 | Sender6    | Receiver6    |  22.75 | 2023-06-30  |
|         7 |         7 | Sender7    | Receiver7    |  48.90 | 2023-07-05  |
|         8 |         8 | Sender8    | Receiver8    |  15.30 | 2023-08-10  |
|         9 |         9 | Sender9    | Receiver9    |  37.45 | 2023-09-15  |
|        10 |        10 | Sender10   | Receiver10   |  29.80 | 2023-10-20  |
+-----------+-----------+------------+--------------+--------+-------------+
10 rows in set (0.01 sec)
```

27. Total payments received for each courier

```
mysql> SELECT
    ->     c.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     SUM(p.Amount) AS TotalPaymentsReceived
    -> FROM
    ->     Courier c
    -> JOIN
    ->     Payment p ON c.CourierID = p.CourierID
    -> GROUP BY
    ->     c.CourierID, c.SenderName, c.ReceiverName;
+-----------+------------+--------------+----------------------+
| CourierID | SenderName | ReceiverName | TotalPaymentsReceived |
+-----------+------------+--------------+----------------------+
|         1 | Sender1    | Receiver1    |                25.50 |
|         2 | Sender2    | Receiver2    |                35.75 |
|         3 | Sender3    | Receiver3    |                18.90 |
|         4 | Sender4    | Receiver4    |                42.25 |
|         5 | Sender5    | Receiver5    |                30.60 |
|         6 | Sender6    | Receiver6    |                22.75 |
|         7 | Sender7    | Receiver7    |                48.90 |
|         8 | Sender8    | Receiver8    |                15.30 |
|         9 | Sender9    | Receiver9    |                37.45 |
|        10 | Sender10   | Receiver10   |                29.80 |
+-----------+------------+--------------+----------------------+
10 rows in set (0.01 sec)
```

28. List payments made on a specific date**.**

```
mysql> SELECT
    ->     PaymentID,
    ->     CourierID,
    ->     LocationID,
    ->     Amount,
    ->     PaymentDate
    -> FROM
    ->     Payment
    -> WHERE
    ->     PaymentDate = '2023-02-10';
+-----------+-----------+------------+--------+-------------+
| PaymentID | CourierID | LocationID | Amount | PaymentDate |
+-----------+-----------+------------+--------+-------------+
|         2 |         2 |          3 |  35.75 | 2023-02-10  |
+-----------+-----------+------------+--------+-------------+
1 row in set (0.00 sec)
```

29. Get Courier Information for Each Payment

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     c.SenderName,
    ->     c.ReceiverName,
    ->     p.Amount,
    ->     p.PaymentDate
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Courier c ON p.CourierID = c.CourierID;
+-----------+-----------+------------+--------------+--------+-------------+
| PaymentID | CourierID | SenderName | ReceiverName | Amount | PaymentDate |
+-----------+-----------+------------+--------------+--------+-------------+
|         1 |         1 | Sender1    | Receiver1    |  25.50 | 2023-01-05  |
|         2 |         2 | Sender2    | Receiver2    |  35.75 | 2023-02-10  |
|         3 |         3 | Sender3    | Receiver3    |  18.90 | 2023-03-15  |
|         4 |         4 | Sender4    | Receiver4    |  42.25 | 2023-04-20  |
|         5 |         5 | Sender5    | Receiver5    |  30.60 | 2023-05-25  |
|         6 |         6 | Sender6    | Receiver6    |  22.75 | 2023-06-30  |
|         7 |         7 | Sender7    | Receiver7    |  48.90 | 2023-07-05  |
|         8 |         8 | Sender8    | Receiver8    |  15.30 | 2023-08-10  |
|         9 |         9 | Sender9    | Receiver9    |  37.45 | 2023-09-15  |
|        10 |        10 | Sender10   | Receiver10   |  29.80 | 2023-10-20  |
+-----------+-----------+------------+--------------+--------+-------------+
10 rows in set (0.00 sec)
```

30. Get Payment Details with Location

```
mysql> SELECT
    ->     p.PaymentID,
    ->     p.CourierID,
    ->     p.LocationID,
    ->     l.LocationName,
    ->     l.Address,
    ->     p.Amount,
    ->     p.PaymentDate
    -> FROM
    ->     Payment p
    -> JOIN
    ->     Location l ON p.LocationID = l.LocationID;
+-----------+-----------+------------+--------------+-----------------------------------------+--------+-------------+
| PaymentID | CourierID | LocationID | LocationName | Address
                | Amount | PaymentDate |
+-----------+-----------+------------+--------------+-----------------------------------------+--------+-------------+
|         1 |         1 |          1 | Office A     | 123 Main St, Cityville, State, Zipcode      |  25.50 | 2023-01-05  |
|         2 |         2 |          3 | Branch X     | 789 Maple St, Villagetown, State, Zipcode   |  35.75 | 2023-02-10  |
|         3 |         3 |          2 | Warehouse 1  | 456 Oak St, Townsville, State, Zipcode      |  18.90 | 2023-03-15  |
|         4 |         4 |          5 | Storefront Z | 202 Elm St, Riverside, State, Zipcode       |  42.25 | 2023-04-20  |
|         5 |         5 |          4 | Factory 5    | 101 Pine St, Hamletville, State, Zipcode    |  30.60 | 2023-05-25  |
|         6 |         6 |          6 | Facility Q   | 303 Cedar St, Mountainville, State, Zipcode |  22.75 | 2023-06-30  |
|         7 |         7 |          8 | Center B     | 505 Redwood St, Valleytown, State, Zipcode  |  48.90 | 2023-07-05  |
|         8 |         8 |          7 | Hub 7        | 404 Birch St, Lakeside, State, Zipcode      |  15.30 | 2023-08-10  |
|         9 |         9 |          9 | Depot Y      | 606 Walnut St, Beachville, State, Zipcode   |  37.45 | 2023-09-15  |
|        10 |        10 |         10 | Station C    | 707 Spruce St, Hillside, State, Zipcode     |  29.80 | 2023-10-20  |
+-----------+-----------+------------+--------------+-----------------------------------------+--------+-------------+
10 rows in set (0.00 sec)
```